

Alt  
B1  
cont.  
combination comprises glyphosate-ammonium and a herbicide selected from the group consisting of dicamba, atrazine, sulcotrione, bromoxynil, clopyralid, isoxaflutole, pendimethalin, alachlor, thiensulfuron-methyl, flumetsulam, tritosulfuron, and fluthiamide.

38. The herbicidal composition as claimed in claim 24 wherein the herbicidal combination comprises glyphosate-isopropylammonium and a herbicide selected from the group consisting of 2,4,D,MCPA, pyridate, dimethenamid.--

REMARKS

This invention provides for herbicidal compositions which are useful against unwanted plants that are associated with tolerant maize crops. Applicants discovered that particular combinations of herbicides interact synergistically when they are employed to combat unwanted plant growth in tolerant maize crops. This invention further provides for the use of the inventive herbicidal combinations in combatting unwanted plant growth in fields planted with maize.

This Amendment adds 3 claims in excess of 20 and a check for \$72.00 is enclosed to cover the cost of these new claims. It is believed that no further fee is due. If, however, and additional fee is required, the Assistant Commissioner is authorized to charge said fee to Deposit Account No. 50-0320.

This Amendment cancels all the claims in favor of new claims 16 to 38. Support for these new claims is found in the claim in which they replace. Applicants have added these new claims, which recite specific compounds and avoids the use of generic terms, in response to the Requirement for an Election of Species. Applicants are making these changes in order to reach a reasonable compromise with the Examiner on the subject matter to be searched and not

for reasons related to patentability. Applicants reserve the right to file a divisional application directed to claims containing generic description.

The proviso clause recited in the independent claims is added in order to exclude specific combinations provided for in EP 569 944 (U.S. equivalents: U.S. Patent Nos. 5,461,019 and 5,696,031), WO 96/41547 (U.S. Patent No. 5,990,047) and WO 96/32012 (U.S. Patent No. 95,987,432). These prior publications were mentioned in the European Search Report that formed the basis of the IDS filed May 4, 2000.

If the Examiner re-issues a Requirement for an Election of Species with the new set of claims, Applicants again elect herbicidal combinations comprising glufosinate-ammonium (A1.2) and mesotrione (B1.16). Applicants again traverse this requirement for reasons of record if this requirement is not made solely for examination purposes. Applicants urge that the data in the specification supports their contention that the claimed combinations are synergistic. Claim 21, 22, 23, 28, 37 and 38 are specifically directed to compositions for which there is in the specification.

In the parent application, the Examiner argued that there was not unity of inventors "because synergy remains an unpredictable property." Office Action at 2. In order to advance prosecution, the new set of claims avoids the sole use of generic terms and provides specific combination partners, which one can reasonably conclude are synergistic based upon the data provided in the description. Accordingly, it is urged that Requirement is improper and should be withdrawn.

The new set of claims renders the rejection of claim 1 to 6 and 9 to 12 under 35 U.S.C. § 101 moot and withdrawal of this rejection is requested.

Claims 7, 8 and 13 to 15 were rejected in the parent application under 35 U.S.C. § 103(a) for allegedly being unpatentable over the combined teachings of Takematsu et al., U.S. 4,265,654 ("Takematsu") and Carter et al., U.S. 5,006,158 ("Carter"). Applicants respectfully disagree since neither patent taken alone or in any fair combination suggests to one of ordinary skill in the art that one could combine particular herbicides and arrive at a particular combination that exhibits synergistic herbicidal activity against unwanted plants in tolerant crops of maize. Accordingly, withdrawal of this rejection is requested.

The rejection acknowledges that Takematsu or Carter does not disclose the inventive herbicidal combinations. Office Action at 4. However, the rejection concludes that "it would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to have used Applicants' elected glufosinate and mesotrione together or in sequence for the control of weeds because the prior art teaches that it was well known to use glufosinate in combination with additional secondary herbicides." *Id.* Applicants respectfully disagree because neither patent suggest the inventive combinations would be useful against unwanted plant growth in tolerant maize, let alone the fact that the herbicidal activity would be synergistic. In fact, it should be noted that Takematsu and Carter are silent with respect to tolerant maize crops. Hence, these prior patents cannot provide any motivation to prepare herbicidal combinations comprising specific herbicides.

Moreover, for the reasons that follow, it is respectfully urged that Takematsu taken with Carter does not suggest to one skilled in the art the inventive combinations. Hence, the rejection is based upon impermissible hindsight and should be withdrawn.

Takematsu describes herbicidal combinations which are used non-selectively against the undesired plants (i.e., they are total herbicides). Alloxydim, a herbicide not presently

claimed, is not a herbicide one in the art would expect to be useful against maize crops since the herbicide is not selective and cannot be used in monocotyledonous crops such as maize. In support of their position, Applicants point to the description of alloxydim found in the "The Pesticide Manual", 12<sup>th</sup> edition 2000 which states:

"USES: It is used post-emergence against grass weeds and volunteer cereals in sugar beet, vegetables and broad-leaved crops at 0.5-1.0 kg a.i./ha. Split applications with herbicides effective against broad-leaved weeds are recommended to increase the range of herbicidal activity. Phytotoxicity Non-phytotoxic to broad-leaved crops."

Hence, a practitioner would not look to the teaching of Takematsu if he were interested in preparing herbicidal combinations against maize since alloxydim is a non-selective herbicide.

Carter relates to novel benzoylcyclohexane diones. Benzoylcyclohexane diones achieve their herbicidal activity by a mechanism of action which is different from cyclohexanedione oximes, such as alloxydim. Alloxydim is a herbicide having a mode of action as inhibitors of fatty acid biosynthesis in plants; see e.g., "The Pesticide Manual", 12<sup>th</sup> edition 2000, under section "Alloxydim", subsection "Biochemistry":

Alloxydim/Biochemistry  
Fatty acid synthesis inhibitor, by inhibition of acetyl CoA carboxylase (ACCase). Mitosis inhibitor. Mode of action, Selective systemic herbicide, absorbed predominantly by the leaves, and, to a lesser extent, by the roots.

Mesotrione is not a fatty-acid synthesis inhibitor. Mesotrione is a HPPDO-inhibitor in plants; see e.g. "The Pesticide Manual", 12<sup>th</sup> edition 2000, section "Mesotrione", subsection "Biochemistry":

Mesotrione/Biochemistry  
p-Hydroxyphenyl pyruvate dioxygenase inhibitor, which ultimately affects carotenoid biosynthesis. Selectivity in maize derives from differential metabolism. Mode of action Uptake is foliar and via the root, with both acropetal and basipetal

translocation. Symptoms are whitening of leaves, followed by necrosis of the meristematic tissue.

Hence, mesotrione is completely different from alloxydim in terms of its mode of action. Thus, two herbicides are not recognized in the art as equivalent. Hence, the practitioner would not be motivated to substitute mesotrione for alloxydim in the herbicidal compositions taught in Takematsu and the rejection does not establish a *prima facie* case of obviousness. Moreover, Carter does not correct for this deficiency since Carter provides for novel benzoylcyclohexane diones and fails to teach specific synergistic mixtures of the novel benzoylcyclohexane diones with other herbicides. Thus, there is no motivation to combine the benzoylcyclohexane diones of Carter with the glyphosate disclosed in Takematsu.

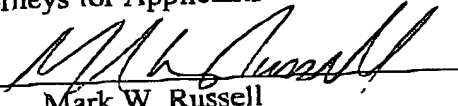
Thus, in view of the foregoing, it is urged that the rejection does not establish a *prima facie* case of obviousness and the reconsideration and withdrawal of the rejection are requested.

Favorable action is earnestly solicited.

Respectfully submitted,

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